

MARS SAMPLE RETURN: ISSUES AND RECOMMENDATIONS

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The Space Studies Board of the United States National Academy of Sciences authorized a Task Group to report on issues and recommendations involved with Mars sample return. This group, chaired by Dr. Kenneth H. Nealson (University of Wisconsin), was composed of 12 members with experience in Mars science, space engineering, ecology, paleobiology, microbiology, and molecular biology as well as issues in space law. All recommendations were made with the following three general notions: 1) while current evidence suggests that there is no life on Mars today, the existence of life in less hostile microenvironments can not be ruled out; 2) that risk due to contamination of Earth by putative martian organisms is extremely low, but it can not be proven that the risk is zero; and 3) the uncertainties related to the existence of martian life can be greatly reduced by a systematic research program including remote analyses, in situ studies, and sample return analyses. Recommendations were made in the three general areas: a) sample return and control; b) sample evaluation; and c) program oversight. The specific recommendations and the ramifications of each of them will be discussed.

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Meeting F3.4 Evolving Planetary Protection Policy for Sample Return

MSO: Dr. Michael A. Meyer

N/A

Oral Presentation

No Support Requested